Gulf of Mexico Harmful Algal Bloom Bulletin

13 December 2007

NOAA Ocean Service

NOAA Satellites and Information Service

Last bulletin: December 11, 2007

Conditions Report

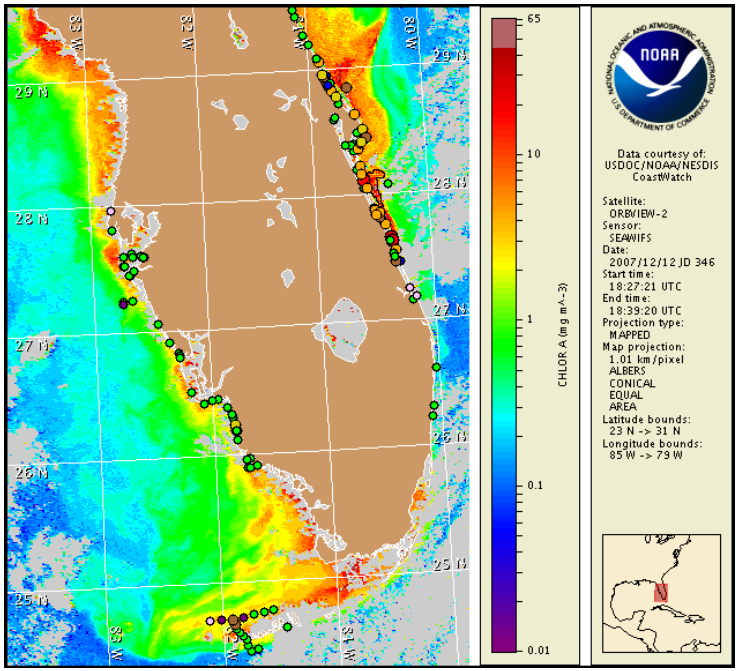
E Florida: A harmful algal bloom has been identified from southern Volusia to southern Indian River County. Patchy moderate impacts are possible today through Sunday from southern Volusia to northern Indian River County, with patchy high impacts possible today through Sunday in southern Brevard and southern Indian River Counties.

SW Florida: A harmful algal bloom has been identified in northern Collier County. Patchy very low impacts are possible in northern Collier County through Saturday, with patchy moderate impacts possible Saturday night through Sunday. No other impacts are expected in southwest Florida through Sunday, December 16.

Analysis

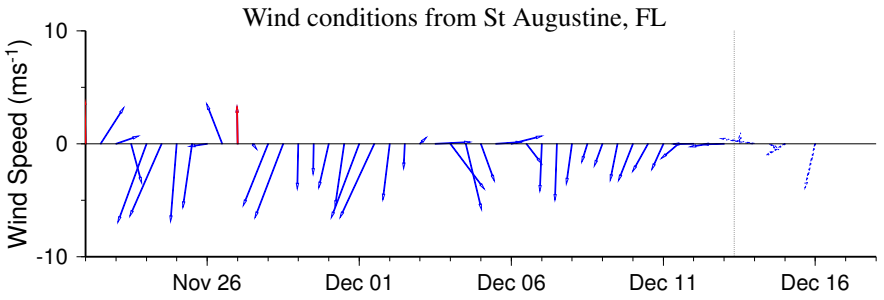
E Florida: The bloom located in eastern Florida persists from southern Volusia to southern Indian River County, with low concentrations of *Karenia brevis* confirmed as far south as central St. Lucie County at Fort Pierce (12/11, FWRI). Background concentrations of *K. brevis* were confirmed this week in Martin County near St. Lucie Inlet (12/8-9, FWRI). Medium concentrations of *K. brevis* have been confirmed from New Smyrna Beach, in Volusia County, to Round Island Park, on the Indian River-St. Lucie County line, with high concentrations confirmed at Vero Beach in Indian River County (12/9-11, FWRI). Reports of respiratory irritation have been received over the past few days from Cape Canaveral to Melbourne. Several high chlorophyll features are visible along the coast of eastern Florida based on satellite imagery from 12/12. A high chlorophyll feature (>10μg/L) extends from the coast of Volusia County near New Smyrna Beach at 28°52’40"N 80°44’35"W offshore to 29°4’17"N 80°36’21"W. Chlorophyll is elevated (5-9μg/L) along the coast of northern Brevard County, with higher chlorophyll levels (>10μg/L) from 28°28’55"N 80°30’42"W, near Cape Canaveral, to 28°19’53"N 80°35’38"W, just north of Melbourne. High chlorophyll levels (>10μg/L) are visible along the coast of Brevard and Indian River Counties from 28°7’41"N 80°32’45"W to 27°42’22"N 80°20’19"W. High chlorophyll levels also extend in a band offshore from 29°6’2"N 80°27’32"W to 29°16’41"N 80°21’49"W. Continued sampling in St. Lucie County is recommended, as continued slight southerly transport of the bloom is possible through the weekend. Onshore winds through Sunday will likely increase the potential for impacts along the coast, with slightly lower impacts possible Saturday night and Sunday. -Allen, Keller

Please refer to subsequent South Florida bulletin for analysis and information regarding southwest Florida and the Florida Keys.



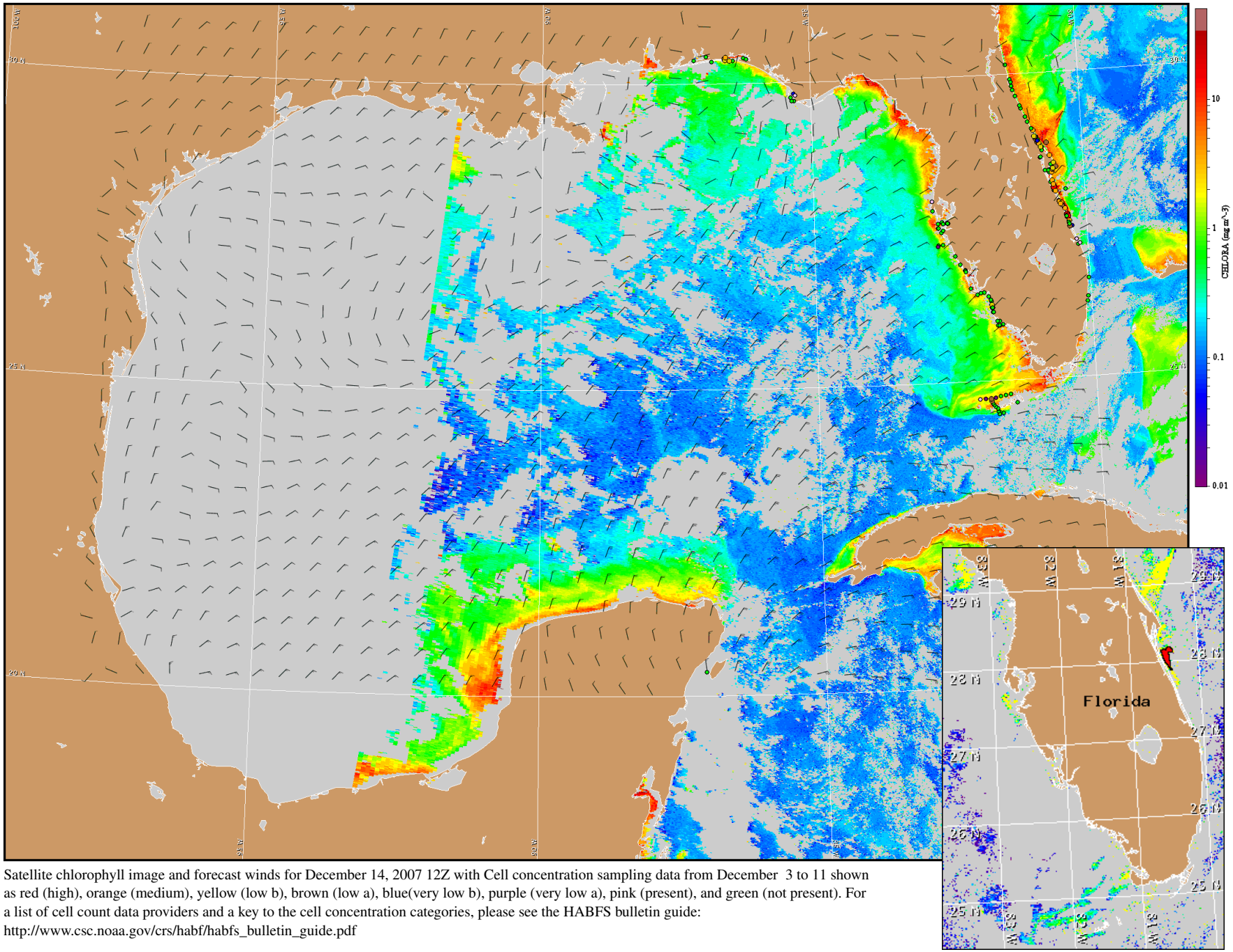
Satellite chlorophyll image with possible HAB areas shown by red polygon(s). Cell concentration sampling data from December 3 to 11 shown as red (high), orange (medium), yellow (low b), brown (low a), blue(very low b), purple (very low a), pink (present), and green (not present). For a list of cell count data providers and a key to the cell concentration categories, please see the HABFS bulletin guide:

http://www.csc.noaa.gov/crs/habf/habfs_bulletin_guide.pdf



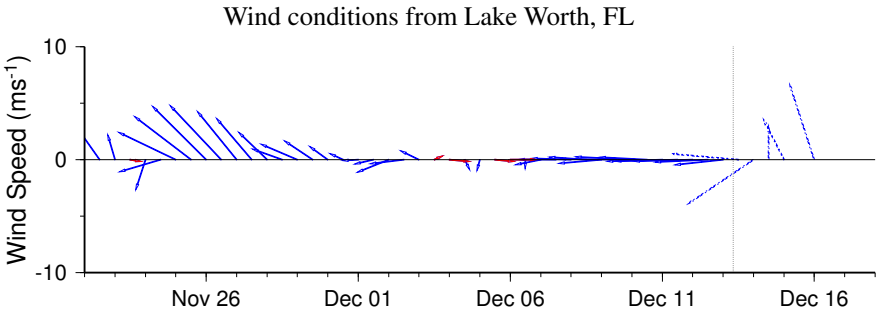
Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts.

E Florida: Easterly winds today at 5-10 knots (3-5 m/s) becoming northeasterly tonight and northerly Friday at 10-15 knots (5-8 m/s). Easterly winds Saturday becoming south to southwesterly Saturday night and building to 15-20 knots (8-10 m/s). Northerly winds Sunday.



Satellite chlorophyll image and forecast winds for December 14, 2007 12Z with Cell concentration sampling data from December 3 to 11 shown as red (high), orange (medium), yellow (low b), brown (low a), blue(very low b), purple (very low a), pink (present), and green (not present). For a list of cell count data providers and a key to the cell concentration categories, please see the HABFS bulletin guide: http://www.csc.noaa.gov/crs/habf/habfs_bulletin_guide.pdf

Verifi ed and suspected HAB areas shown in red. Other areas of high chlorophyll concentration shown in yellow (see p. 1 analysis for interpretation).


Wind conditions from Lake Worth, FL
Wind Speed (ms-1)
10
0
-10
Nov 26
Dec 01
Dec 06
Dec 11
Dec 16